

Amendment and Response under 37 C.F.R. 1.116

Applicant: Jeffrey D. Meyer

Serial No.: 09/560,509

Filed: April 27, 2000

Docket No.: 10002145-1

Title: INTERNET USAGE DATA RECORDING SYSTEM AND METHOD WITH CONFIGURABLE
DATA COLLECTOR SYSTEM

REMARKS

This Amendment is responsive to the Final Office Action mailed November 13, 2003. Claims 1, 2, 4-14, 16-18 and 20-31 were rejected. Claims 1, 2, 4-14, 16-18 and 20-31 remain pending in the application and are presented for reconsideration and allowance.

Claim Rejections under 35 U.S.C. § 102

Claims 1-25 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,405,251 Bullard et al. (hereinafter "Bullard"). Applicant submits that the Bullard reference fails to disclose the invention of independent claim 1.

Independent claim 1 recites a network usage recording system. The system comprises a collector including an encapsulator for reading a plurality of network data records from a network data source and converting the network data records to a plurality of normalized metered events. An aggregator is included for processing the normalized metered events to create aggregated normalized metered events. A data storage system is provided, wherein the aggregator periodically stores the aggregated normalized metered events in the data storage system. A configuration server is in communication with the encapsulator, the aggregator and the data storage system, wherein the configuration server stores configuration data for the encapsulator, the aggregator, and the data storage system that determines whether the collector operates as a network data collector or a correlator collector.

Bullard discloses a system for enhancement of network accounting records. The system includes a data collector layer that is a distributed layer of individual data collectors 18. The data collectors 18 collect raw accounting information and convert data into normalized records referred to as network accounting records (NARs). Each of the data collectors forward network accounting records to a flow aggregation processor 13, a central collection point for all network accounting records produced from various data collectors 18 in the data collection layer 18. The flow aggregation processor 60 aggregates and/or enhances record data across the network devices to produce summary NARs' (See Bullard, column 4, lines 1-26 and Fig. 1), (column 18, lines 39-49).

In reference to Bullard Fig. 14, flow data collector 52 include several NAR processing components or processes, including a NAR constructor 306, a correlator 308, an

enhancement process 310 and an aggregator 312. Each equipment interface is associated with a flow data collector. Memory 304 also includes a flow data collector configuration file 318. The configuration file 318 is provided at startup to configure the flow data collector 52. The configuration file 318 includes a time parameter 320 and a policy 322. The NAR 304 received from network devices are processed in accordance with the policy 322 of the configuration file. NAR are transferred to the flow aggregation processor 60 when the time specified by the time parameter 320 expires. See Bullard, column 15, lines 45-67 through column 16, lines 1-12.

In reference to Bullard Figure 31, a service management feedback process 750 includes three components, service provisioning 752, policy server 754 and service accounting 756. Service provisioning 752 sends requests to the policy server 754 to obtain an appropriate active policy, and obtaining rules and domain information from the policy server. See Bullard, column 32, lines 43-49. Policy server 754 keeps enforcement of the levels of quality that are offered by different services types specified in an Internet Service Provider (ISP) contract. See Bullard, column 33, lines 61-63.

Bullard fails to disclose a network usage recording system having a collector including an **encapsulator, an aggregator and a data storage system** component, and a **configuration server in communication with the encapsulator, the aggregator and the data storage system, wherein the configuration server stores configuration data for the encapsulator, the aggregator, and the data storage system that determines whether the collector operates as a network data collector or a correlator collector.** In contrast, Bullard teaches data collectors configured to interface with various network devices or technologies. The data collectors are connected to a central flow aggregator processor. Bullard fails to teach different types of collectors, a data collector or a correlator collector, as claimed by Applicant. Further, each type of collector includes an encapsulator, aggregator and data storage system components, where the configuration server stores configuration data such that the collector can operate as a network data collector or a correlator collector. This allows the same architecture to be used for each type of collector, regardless of whether it operates as a data collector or a correlator collector.

Applicant's invention includes a configuration server that determines whether the collector operates as a network data collector or a correlator collector. The "policy server"

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disclosed by Bullard is not a configuration server as claimed by Applicant. The policy server is disclosed as specifying a level of service for the network based on an ISP service agreement or contract. Bullard recites a service management loop, including a template that is fed into a service provision application that produces a configuration file sent out to the network specifying a level of service for the network. (Column 32, lines 28-65). Again, Bullard fails to disclose a configuration server that determines whether the collector operates as a data collector or a correlator collector.

The network usage recording system of independent claim 1 is not disclosed in Bullard. Applicant respectfully submits that the above rejection under 35 U.S.C. § 102(e) should be withdrawn.

Dependent claims 2 and 4-13 depend directly or indirectly upon independent claim 1. Accordingly, dependent claims 2, 4-13 are also allowable over the art of record.

Bullard also does not teach or suggest the claimed recitations in independent claim 14. Claim 14 recites a network usage recording system. The system comprises a collector system including a collector shell, a query manager, an encapsulator, an aggregator, and a data storage system. A configuration server is in communication with the encapsulator, the aggregator and the data storage system. The configuration server stores configuration data for the collector system that determines whether the collector system operates as a network data collector or a correlator collector.

For the same reasons as stated above with regard to independent claim 1, Applicant submits that Bullard does not teach or suggest these claim recitations. Withdrawal of the above rejection of independent claim 14 under 35 U.S.C. § 102(e) is also requested.

Dependent claim 16 depends directly upon independent claim 14. Accordingly, this dependent claim is allowable over the art of record.

Bullard also does not teach or suggest the claimed recitations in independent claim 17. Claim 17 recites a method for recording network usage. The method comprises defining a collector including an encapsulator, an aggregator and a data storage system. The encapsulator is operated to read a plurality of network data records from a network data source and convert the network data records to a plurality of normalized metered events. The plurality of normalized metered events are aggregated to create a plurality of aggregated normalized metered events. The aggregated normalized metered events are stored in the data

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storage system at periodic intervals. A configuration server is defined, in communication with the encapsulator, the aggregator and the data storage system. Configuration data is stored for the encapsulator, the aggregator and the data storage system in the configuration server, where the configuration data determines whether the collector operates as a network data collector or a correlator collector.

For the same reasons as stated above with regard to independent claim 1, Applicant submits that Bullard does not teach or suggest these claim recitations. Withdrawal of the above rejection of independent claim 17 under 35 U.S.C. § 102(e) is also requested.

Dependent claims 20-23 depend directly or indirectly upon independent claim 17. Accordingly, these dependent claims are allowable over the art of record.

Bullard also does not teach or suggest the claimed recitations in independent claim 24. Claim 24 recites a computer readable medium containing instructions for controlling a computer system to perform a method for recording network usage. The computer readable medium comprises logic for defining a collector including an encapsulator, an aggregator and a data storage system. Logic is provided for operating the encapsulator to read a plurality of network data records from a network data source and convert the network data records to a plurality of normalized metered events. Logic is provided for aggregating the plurality of normalized metered events to create a plurality of aggregated normalized metered events. Logic is provided for storing the aggregated normalized metered events in the data storage system at periodic intervals. Logic is also provided for defining a configuration server in communication with the encapsulator, the aggregator and the data storage system, and storing configuration data for the encapsulator, the aggregator and the data storage system in the configuration server where the configuration data determines whether the collector operates as a network data collector or a correlator collector.

For the same reasons as stated above with regard to independent claim 1, Applicant submits that Bullard does not teach or suggest these claim recitations. Withdrawal of the above rejection of independent claim 24 under 35 U.S.C. § 102(e) is also requested.

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Bullard also does not teach the claims recitations and independent claim 25. Claim 25 recites a network usage recording system. The system comprises a plurality of configurable collectors, where each collector is configurable to operate as one of a plurality of collector types, the collector types including a data collector and a correlator collector. A configuration server is provided in communication with each configurable collector, where the configuration server stores configuration data for each configurable collector that determines the collector type for each collector, and once the configuration data is transferred to each configurable collector, each configurable collector becomes the collector type associated with the configuration data.

For the same reasons as stated above with regard to independent claim 1, Applicant submits that Bullard does not teach or suggest these claim recitations. Withdrawal of the above rejection of independent claim 25 under 35 U.S.C. § 102(e) is also requested.

Dependent claims 26-31 depend directly or indirectly upon independent claim 25. Accordingly, dependent claims 26-31 are also allowable over the art of record.

CONCLUSION

In light of the above, Applicant believes independent claims 1, 14, 17, 24 and 25 and the claims depending therefrom, are in condition for allowance. Allowance of these claims is respectfully requested.

Any inquiry regarding this Amendment and Response should be directed to either Philip S. Lyren at Telephone No. (281) 514-8236, Facsimile No. (281) 514-8332 or Steven E. Dicke at Telephone No. (612) 573-2002, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope address to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 13 day of January, 2004.

By

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